UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,427	10/13/2005	Shinichi Tanaka	112857-590	9480

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EXAMINER
NICKERSON, JEFFREY L

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2008, 07 August 2008*.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-31* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date *15 May 2008*.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to Application No. 10/549,427 filed nationally

on 13 October 2005 and internationally on 02 February 2005.   The amendment

presented on 15 May 2008 and 07 August 2008, which provides change to claims 23,

26, 29, and the specification, is hereby acknowledged. Claims 23-31 have been

examined.

Response to Amendment

2.   All outstanding objections and rejections are hereby withdrawn. New objections

and/or rejections may appear below.

Response to Arguments

3.   Applicant's arguments with respect to claims 23-31 have been considered but are

moot in view of the new ground(s) of rejection.

Specification

4.   The abstract of the disclosure is objected to under 37 CFR 1.72(b) because it

appears to be a literal translation from a foreign language. For instance, in the first

sentence, the phrase "that enables to perform a" could be replaced with "for", resulting

in a clearer abstract. Correction is required. See MPEP § 608.01(b).

Claim Objections

5.   Claims 24, 27, and 30 are objected to under 37 CFR 1.75(c), as being of

improper dependent form for failing to further limit the subject matter of a previous

claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the

claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Regarding claims 24, 27, and 30, applicant recites that "*if another information*

processing apparatus is connected to the network, collect[ing] information regarding a

resource and an operating status of the other information processing apparatuses and

update[ing] the apparatus information table." It appears as if applicant is attempting to

claim the following concept: detecting a new device, which was not previously identified

as being connected to the network, initially connecting to the network, and, upon

detection, gathering the new device's operating status and resource use. However, the

claim language, as written, is inherent to the language of the independent parent claims,

as "another" device will always be "connected to the network" and the operating

statuses and resources will be updated into the information table (lines 1-4 of first

limitation, claims 23, 25, and 29). For purposes of further examination, these claims'

limitations will be treated similar to that of lines 1-4 of the first limitation of claims 23, 26,

and 29.

6.   Claim 25 is objected to because of a minor grammatical error. Appropriate

correction is required.

Regarding claim 25, the phrase "saves these information" should be changed to "saves

the information".

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tan et al (US 5,978,560), and in further view of Gnanasivam et al (US 6,728,905 B1)

and Liu et al (US 5,031,089).

Regarding claim 23, Tan teaches an information processing apparatus (print

server/supervisor), which is coupled to a plurality of other information processing

apparatuses (other printers/output devices) through a network, transmitting a software

cell including a command (job ctrl) and a program (job data) to the other information

processing apparatuses, and carrying out network distributed processing (Tan: abstract,

Figure 1, Figure 3, col 2, lines 45-64), the information processing apparatus comprising:

capability exchange means for collecting information regarding resources and

operating statuses of the other information processing apparatuses and creating an

apparatus information table by transmitting software cells to all the other information

processing apparatuses on the network (Tan: abstract; col 3, line 57 – col 4, line 23),

wherein the apparatus information table includes apparatus data associated with all the

other information processing apparatuses when the information processing apparatus is

in a particular state (Tan: col 3, line 57 – col 4, line 23), and wherein the apparatus

information table includes identifications associated with all the other information

processing apparatuses and the statuses associated with all the other information

apparatuses on the network when the information processing apparatus is in a

particular state (Tan: col 3, line 57 – col 4, line 23), the software cells requesting

transmissions of information regarding the other information processing apparatuses

and receiving software cells as replies from the other information processing

apparatuses (Tan: col 5, lines 51-55);

apparatus specifying means for comparing information regarding a resource

required to execute a function program, with information regarding the resource and the

operating status in the apparatus information table, and specifying one of the

information processing apparatuses capable of executing the function program if the

function program retained in the information processing is executed (Tan: col 5, line 32

– col 6, line 38); and

processing requesting means for transmitting a software cell requesting an

execution of the function program to the information processing apparatus specified in

the apparatus specifying means (Tan: abstract; col 5, line 32 – col 6, line 38).

Tan does not teach wherein the information processing apparatus includes a master/slave status;

wherein a particular status is a master status;

wherein a particular status is a slave status; or

wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus.

Gnanasivam, in a similar field of endeavor, teaches wherein the information processing apparatus includes a master/slave status (Gnanasivam: col 15, lines 30-63);

wherein a particular status is a master status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16); and

wherein a particular status is a slave status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Gnanasivam for maintaining master/slave status information. The teachings of Gnanasivam, when implemented in the Tan system, will allow one of ordinary skill in the art to maintain master/slave statuses of devices in a printing environment. One of ordinary skill in the art would be motivated to

utilize the teachings of Gnanasivam in the Tan system in order to easily identify which

devices are a master or a slave device via a lookup table.

The Tan/Gnanasivam system does not teach wherein the capability exchange

means further exchanges information regarding capability with the other information

processing apparatuses by transmitting the software cell including information regarding

own apparatus as the reply to the other information processing apparatus if the

information processing apparatus receives the software cell requesting the transmission

of information regarding the information processing apparatus from the other

information processing apparatus.

Liu, in a similar field of endeavor, teaches wherein the capability exchange

means further exchanges information regarding capability with the other information

processing apparatuses by transmitting the software cell including information regarding

own apparatus as the reply to the other information processing apparatus if the

information processing apparatus receives the software cell requesting the transmission

of information regarding the information processing apparatus from the other

information processing apparatus (Liu: abstract specifies all nodes may poll one another

for load information).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Liu for load balancing an trading load

information on a decentralized network. The teachings of Liu, when implemented in the

Tan/Gnanasivam system, will allow one of ordinary skill in the art have each printer

maintain its load information and perform supervisory activities in a decentralized

fashion. One of ordinary skill in the art would be motivated to utilize the teachings of Liu

in the Tan/Gnanasivam system in order to allow any device to receive a client command

for processing and eliminate a single point of failure.

Regarding claim 24, this claim contains limitations found within claim 25 and the same

rationale of rejection is used, where applicable.

Regarding claim 25, the Tan/Gnanasivam/Liu system teaches wherein the other

information processing apparatus has a plurality of processors for processing the

function program (Liu: col 3, lines 19-38 provides for multiprocessor nodes); and

wherein the capability exchange means collects information regarding a resource

and an operating status of each of the plurality of processors, and saves the information

in the apparatus information table (Tan: abstract; col 5, line 32 – col 6, line 38 for

obtaining resource and operating status of a particular component; Liu: col 3, lines 19-

38 for wherein component is each processor).

Regarding claim 26, this method claim contains limitations corresponding to that of

claim 23 and the same rationale of rejection is used, where applicable.

Regarding claim 27, this method claim contains limitations corresponding to that of

claim 24 and the same rationale of rejection is used, where applicable.

Regarding claim 28, this method claim contains limitations corresponding to that of

claim 25 and the same rationale of rejection is used, where applicable.

Regarding claim 29, this system claim contains limitations corresponding to that of claim

23 and the same rationale of rejection is used, where applicable.

Regarding claim 30, this system claim contains limitations corresponding to that of claim

24 and the same rationale of rejection is used, where applicable.

Regarding claim 31, this system claim contains limitations corresponding to that of claim

25 and the same rationale of rejection is used, where applicable.

Cited Pertinent Prior Art

9.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

        a.   Kawata et al (US 2002/0032777 A1) discloses a centralized load

balancing system with load estimation.

        b.   Nozaki (US 6,128,644) discloses a centralized load balancing system with

direct client-to-target communications.

        c.   Okanoya et al (US 6,128,657) discloses a centralized load balancing

system.

        d.   Yoshimura et al (US 2003/0163734 A1) discloses a centralized load

balancing system.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./   /Andrew Caldwell/
Jeffrey Nickerson   Supervisory Patent Examiner, Art
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